

WHAT IS CLAIMED IS:

1. A paper feed device comprising:

a setting plate on which a plurality of sheets of
5 paper are placed;

a support unit which elevatably supports the setting
plate, and elevates the setting plate when the support
unit receives a driving force;

a driving unit which drives the support unit so that
10 a uppermost sheet of paper placed on the setting plate
is positioned at a predetermined height for feeding the
sheets of paper;

a power transmission mechanism which transmits the
driving force from the driving unit to the support unit;

15 a link mechanism which cuts off the transmission
of the driving force to the support unit; and

an operation lever which is switched between a first
state and a second state, wherein:

when the operation lever is in the first state, the
20 power transmission mechanism transmits the driving force
to the support unit;

when the operation lever is in the second state,
the link mechanism cuts off the transmission of the driving
force to the support unit; and

25 the support unit is disengaged from the driving unit

by an operation of the link mechanism.

2. The paper feed device according to claim 1,
wherein when the operation lever is in the first state,
5 the operation lever abuts against one end edges of the
sheets of paper placed on the setting plate to align the
one end edges of the sheets of paper.

3. The paper feed device according to claim 2,
10 wherein when the operation lever is in the first state,
a position where the operation lever abuts against the
sheets of paper is adjustable.

4. The paper feed device according to claim 1,
15 wherein:

the support unit includes a power-receiving gear,
which moves up the setting plate when the power-receiving
gear is rotated in one direction;

the power transmission mechanism includes:

20 a sun gear rotated by the driving unit; and
a planet gear, which revolves around the sun
gear;

the planet gear engages with the power-receiving
gear when the operation lever is in the first state; and

25 the planet gear is disengaged from the

power-receiving gear when the operation lever is in the second state.

5 5. The paper feed device according to claim 1,
wherein when the operation lever is switched from the first state to the second state, the setting plate goes down due to weight of the setting plate.

10 6. The paper feed device according to claim 1,
wherein when the operation lever is in the second state, a user is capable of stacking additional sheets of paper on the setting plate.

15 7. The paper feed device according to claim 1,
wherein:

when the operation lever is in the first state, the operation lever is substantially perpendicular to the setting plate; and

20 when the operation lever is in the second state,
the operation lever is substantially parallel to the setting plate.

25 8. An image forming apparatus comprising:
a paper feed device which feeds a sheet of paper;
and

a recording device which forms an image on the sheet of paper fed from the paper feed device, wherein:

the paper feed device includes:

5 a setting plate on which a plurality of sheets of paper are placed;

a support unit which elevatably supports the setting plate, and elevates the setting plate when the support unit receives a driving force;

10 a driving unit which drives the support unit so that a uppermost sheet of paper placed on the setting plate is positioned at a predetermined height for feeding the sheets of paper;

15 a power transmission mechanism which transmits the driving force from the driving unit to the support unit;

a link mechanism which cuts off the transmission of the driving force to the support unit; and

20 an operation lever which is switched between a first state and a second state;

when the operation lever is in the first state, the power transmission mechanism transmits the driving force to the support unit;

25 when the operation lever is in the second state, the link mechanism cuts off the transmission of the driving

force to the support unit; and

the support unit is disengaged from the driving unit
by an operation of the link mechanism.

5 9. A paper feed device comprising:

a setting plate on which a plurality of sheets of
paper are placed;

a support unit which elevatably supports the setting
plate, and elevates the setting plate when the support
10 unit receives a driving force;

a power transmission mechanism which transmits a
driving force, supplied from external, to the support
unit;

a link mechanism which cuts off the transmission
15 of the driving force to the support unit; and

an operation lever, which is switched between a first
state and a second state, wherein:

when the operation lever is in the first state and
the driving force is supplied from the external, the power
20 transmission mechanism transmits the driving force to
the support unit;

when the operation lever is in the second state,
the link mechanism cuts off the transmission of the driving
force to the support unit; and

25 the support unit is disengaged from the driving unit

by an operation of the link mechanism.

10. The paper feed device according to claim 9,
wherein when the operation lever is in the first state,
5 the operation lever abuts against one end edges of the
sheets of paper placed on the setting plate to align the
one end edges of the sheets of paper.

11. The paper feed device according to claim 10,
10 wherein when the operation lever is in the first state,
a position where the operation lever abuts against the
sheets of paper is adjustable.

12. The paper feed device according to claim 9,
15 wherein when the operation lever is in the first state
and the driving force is not supplied from the external,
the support unit and the power transmission mechanism
maintains height of the setting plate.

20 13. The paper feed device according to claim 9,
wherein:

the support unit includes a power-receiving gear,
which moves up the setting plate when the power-receiving
gear is rotated in one direction;

25 the power transmission mechanism includes:

a sun gear rotated by the driving force supplied from the external; and

a planet gear, which revolves around the sun gear;

5 the planet gear engages with the power-receiving gear when the operation lever is in the first state; and the planet gear is disengaged from the power-receiving gear when the operation lever is in the second state.

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14. The paper feed device according to claim 9, wherein when the operation lever is switched from the first state to the second state, the setting plate goes down due to weight of the setting plate.

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15. The paper feed device according to claim 9, wherein when the operation lever is in the second state, a user is capable of stacking additional sheets of paper on the setting plate.

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16. The paper feed device according to claim 9, wherein:

when the operation lever is in the first state, the operation lever is substantially perpendicular to the setting plate; and

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when the operation lever is in the second state,
the operation lever is substantially parallel to the
setting plate.